

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 3-5, 16, 18-21 and 23-39 are pending, with Claims 1, 16, 21, 26, 30 and 34 amended and Claims 38 – 39 added by the present amendment.

In the Official Action, Claim 21 was objected to; Claims 1, 3-5 and 26-33 were rejected under 35 U.S.C. § 112, first paragraph; Claims 1, 3-5, 16, 18-21, and 23-37 were rejected under 35 U.S.C. § 112, second paragraph; Claims 16 and 21 were rejected under 35 U.S.C. § 103 as being unpatentable over Wallentin, (U.S. Patent No. 6,347,091) in view of Applicants admitted prior art; Claims 16 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Quick (U.S. Patent No. 5,673,259) in view of Applicants' admitted prior art; Claims 18-20 and 23-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wallentin, Quick, Applicants' submitted prior art and Kumar (U.S. Patent No. 6,418,148); and Claim 34 was indicated as containing allowable subject matter. No prior art was applied as a basis for rejection for independent Claims 26 and 30. Because independent Claims 26 and 30 recite features similar to allowable independent Claim 34, Applicants believe that Official Action intended to indicate that independent Claims 26 and 30 also contain allowable subject matter.

Applicants acknowledge with appreciation the indication of allowable subject matter.

Claim 21 is amended in response to the outstanding objection. Claims 1, 16, 21, 26, 30 and 34 are amended in response to the rejections under 35 U.S.C. § 112, first and second paragraph. Support for these amendments is found in Applicants' originally filed specification.¹ No new matter is added.

¹ Specification page 12, lines 11-20; page 17, lines 3-10; page 13, lines 6-9; page 15, lines 2-34; page 21, lines 18-28.

Applicants acknowledge with appreciation the personal interview between the Examiner and Applicants' representative on December 14, 2006. During the interview, the Examiner agreed that the claims then presented overcame the outstanding rejections, with the exception of Claim 16. Claim 16 of the proposed response shown to the Examiner has been further amended as requested by the Examiner. Thus, Applicants believe the present application is in condition for allowance.

Briefly recapitulating, amended Claim 1 is directed to a traffic control method for mobile data communications of a radio base station in a mobile communication system of a scheme using spread signals including CDMA, where two types of communication channels including a common channel and a plurality of individual channels are provided such that the common channel is set to be used by a plurality of users together and each individual channel is set to be used exclusively by one user. The method includes carrying out a communication using the common channel, between a mobile radio terminal and the radio base station; receiving at the radio base station an allocation request from the mobile radio terminal after the mobile radio terminal has detected an increase or a decrease of data traffic during the communication; measuring, at the radio base station, an uplink reception interference level and a downlink transmission power level, and relaying the uplink reception interference level and the downlink transmission power level, along with respective uplink and downlink thresholds, to the mobile radio terminal; and shifting from the communication using the common channel to the communication using the individual channel between the mobile radio terminal and the radio base station, when the mobile radio terminal indicates that the uplink reception interference level and the downlink transmission power level are not greater than the respective uplink and downlink thresholds. Independent Claim 16 is directed to a base station apparatus corresponding to the base station method recited in Claim 1. Independent Claims 21 and 26 are directed to a corresponding mobile terminal apparatus and

mobile terminal method. In Claims 1, 16, 21, and 38, the change in traffic detected by the mobile may relate to traffic at the mobile or at the base station.²

Amended Claim 26 is directed to a traffic control method for mobile data communications in a mobile communication system of a scheme using spread signals including CDMA, where two types of communication channels including a common channel and a plurality of individual channels are provided such that the common channel is set to be used by a plurality of users together and each individual channel is set to be used exclusively by one use. The method includes carrying out a communication using the common channel, between a mobile radio terminal and a radio base station; receiving at the radio base station an allocation request indicating that the mobile radio terminal has detected an increase or a decrease of data traffic during the communication; and carrying out an admission judgment for a shift from the common channel to the individual channel at the radio base station. The admission judgment includes determining whether or not the uplink reception interference level and the downlink transmission power level are greater than the respective uplink and downlink thresholds. The method also includes relaying the admission judgment to the mobile radio terminal; and shifting from the communication using the common channel to the communication using the individual channel between the mobile radio terminal and the radio base station, when an admission of the shift is possible. The steps of carrying out an admission judgment, relaying and shifting are repeated upon receipt from the mobile radio terminal of a request to shift, the request to shift being transmitted by the mobile radio terminal a predetermined time after the mobile radio terminal receives a negative admission judgment. The predetermined time is set by a timer in the mobile radio terminal. Independent Claim 34 is directed to a corresponding mobile terminal method. Independent

² Specification, page 13, lines 6-9.

Claims 30 and 39 are directed a corresponding base station and base station method, respectively.

Wallentin describes a mobile communications control method where the state of a connection is used to specify one of plural different types of radio channels bearing the connection over the radio interface. The connection is dynamically adapted to an optimal state based on one or more conditions relating to the connection. Based on a predicted parameter value, an optimal connection state is determined and implemented. If the predicted parameter value changes later in the connection, another connection state may be dynamically selected that is better suited in accordance with a newly predicted parameter value. In particular, Wallentin describes a generic UMTS core network node 16 that includes a packet router 100, a packet buffer 102 and a packet window buffer 104.³ As the amount of data in the packet buffer 102 builds, channels are assigned or reassigned to accommodate data flow.⁴ In another embodiment, a packet arrival rate or packet density for a particular packet connection at the base station is used to predict future packet flow. Other parameters such as connection bit rate, the current number of idle devices like receivers in each base station, the current of idle spreading codes, etc., may also be used to determine a predicted packet flow. Depending on the newly predicted packet flow, the selected channel type and/or mobility management scheme may be changed several times for a connection.⁵

In another embodiment of Wallentin, after a last amount of data to be sent is transmitted (e.g., the base station transmit queue is empty), a predefined time period is monitored. If a new data packet is not received at the end of that predetermined time period, the dedicated channel is released and a new shared channel is allocated to the connection.⁶

³ Wallentin, column 7, lines 10-22.

⁴ Wallentin, column 7, line 63 through column 8, line 14.

⁵ Wallentin, column 9, lines 12-27.

⁶ Wallentin, column 10, lines 1-17.

Quick describes a mobile radio communications system having an ability to switch from a random access channel to a dedicated channel when bandwidth demands exceed a first threshold and switching from the dedicated channel to the random access channel when the bandwidth demand drops below a second threshold. With reference to Figure 3, Quick describes a processor 302 located in switching station 110 which may be provided and a control switching between the dedicated channel 214 and the random access channel 208. Typically, a switching station 110 collects communications information 306a through 306n from the respective base station units 108a through 108n. The bandwidth demand, which is included in communications information 306a to 306n is then used by the processor 302 to determine when switching between the dedicated channel 214 and random access channel 208 is appropriate for each mobile station associated with base stations 108a through 108n. Alternatively, processor 302 may determine if all of the mobile stations are to switch simultaneously from dedicated channel 214 to random access channel 208 and vice versa.⁷

However, as acknowledged during the interview of June 15, 2006, Wallentin and Quick each fail to disclose or suggest Steps 29-30 shown in Applicants' originally filed Figure 5. Independent Claims 1, 16, 21, and 38 are amended/drafted to recite the features shown in Steps 29-30 of Figure 5. Wallentin and Quick each fail to disclose or suggest

- measuring, at the radio base station, an uplink reception interference level and a downlink transmission power level, and relaying the uplink reception interference level and the downlink transmission power level, along with respective uplink and downlink thresholds, to the mobile radio terminal; and
- shifting from the communication using the common channel to the communication using the individual channel between the mobile radio terminal and the radio base station, when the mobile radio terminal indicates that the uplink reception interference level and the downlink transmission power level are not greater than the respective uplink and downlink thresholds.

Wallentin and Quick similarly fail to disclose or suggest a mobile terminal communications method including steps of

⁷ Quick, column 11, lines 5-19.

- detecting at the mobile station device an increase or a decrease of data traffic during the communication;
- sending an allocation request to the radio base station upon detection of the increase or decrease of data traffic;
- receiving, from the radio base station in response to the allocation request, a measurement of an uplink reception interference level and a downlink transmission power level, along with respective uplink and downlink thresholds;
- determining whether or not the received measured uplink reception interference level and the downlink transmission power level are greater than the respective uplink and downlink thresholds; and
- shifting from the communication using the common channel to the communication using the individual channel with the radio base station when the uplink reception interference level and the downlink transmission power level are not greater than the respective uplink and downlink thresholds.

As noted above, Claim 34 was indicated as containing allowable subject matter. Thus Applicants submit that analogous independent Claims 26, 30 and 39 also contain allowable subject matter, at least because Wallentin and Quick each fail to disclose or suggest the feature of

- [repeating] a step of carrying out an admission judgment upon receipt from the mobile radio terminal of a request to shift, said request to shift transmitted by the mobile radio terminal a predetermined time after the mobile radio terminal receives a negative admission judgment, said predetermined time being set by a timer in the mobile radio terminal.

Applicants admitted prior art and Kumar do not cure the deficiencies of Wallentin and Quick. MPEP §706.02(j) notes that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Also, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Without addressing the first two prongs of the test of

obviousness, Applicants submit that the Official Action does not present a *prima facie* case of obviousness because both Wallentin, Quick and Kumar fail to disclose all the features of Applicants' claimed invention.

Accordingly, in view of the present amendment and in light of the previous discussion, Applicant respectfully submits that the present application is in condition for allowance and respectfully requests an early and favorable action to that effect.

Respectfully submitted,

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